STATE OF LOUISIANA
CLASS VI UNDERGROUND INJECTION CONTROL
PROGRAM 1422 DESCRIPTION

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[TOC \o "1-3" \h \z \u]

Class VI Underground Injection Control Program Description

Commented [CS1]: COREY: Check IMD vs OC references

1. Program Scope, Structure, Coverage and Processes

The U.S. Environmental Protection Agency (EPA) granted primary enforcement authority (primacy) over Class I, II, III, IV, and V injection wells—excluding all Indian lands—to the Louisiana Department of Natural Resources (LDNR), Office of Conservation (OC) on April 23, 1982. Since then, the Louisiana Underground Injection Control (UIC) Program has strived to implement the approved program description, applicable rules and regulations, and EPA directives. References in this Work Plan to we, us, or our are intended to mean the Office of Conservation.

Commented [CS2]: BLAKE: Office of Conservation vs IMD

Use OC.

The applicable UIC programs for Class I, III, IV and V injection wells are authorized under Section 1422 of the Safe Drinking Water Act (SDWA), while the Class II program related to oil and gas activities is authorized under SDWA Section 1425.

The LDNR is revising the existing 1422 program to include program oversight for Class VI Carbon Dioxide Geologic Sequestration Wells. The USEPA promulgated federal requirements under the Safe Drinking Water Act for the underground injection of carbon dioxide in 2010 establishing a new class of injection wells (Class VI). This submittal will demonstrate that the Louisiana UIC program with Class VI oversight is at least as stringent as its federal counterpart. In accordance with the provisions of Louisiana's Administrative Procedure Act, R.S. 49:950 et seq., and through the power delegated under the laws of the state of Louisiana, the Department of Natural Resources, Office of Conservation adopted the Statewide Order No. 29-N-6 (LAC 43:XVII Subpart 6, Chapter 6) to facilitate the permitting, siting, construction, operation, monitoring and site closure of Class VI injection wells used to inject carbon dioxide for the purposes of geologic sequestration.

Louisiana OC is the sole implementation agency for our current primacy program; this will

continue as Class VI wells are added to the program. This revised program description incorporates changes as required under federal regulations and is only an addendum to the current Louisiana 1422 UIC primacy authority. Nothing in this document in any way affects the current administration of the Class II program under Section 1425 of the SDWA or the Class I, Class III, and Class V programs under Section 1422 of the SDWA. This revision of the Louisiana 1422 UIC program is for the sole purpose of adding Class VI injection wells to the program.

2. Implementing Agency Organizational Structure

Staff in the Louisiana IMD have education, skills, and in-house experience with most of the technical and policy areas relevant to evaluating Class VI permit applications, including, but not limited to evaluating and issuing Class VI permits, onsite inspection, compliance monitoring and overseeing GS projects throughout their life span. The state plans to implement a "team" approach to permitting by dividing permit applications among staff with relevant areas of expertise. However, some third-party contractor experience will be needed in the early stages of the program with modeling, risk, and environmental justice analysis. It is anticipated that third-party modelers will be utilized during the permit review stages at the onset of primacy, but as IMD staff are trained and gain experience, reliance on third-party modelers will become minimal. Third-party risk analysts may need to be contracted out in perpetuity; IMD does not currently have expertise in this area and it is uncertain whether they will obtain it in the future.

The table below identifies the sources of this expertise.

Expertise Area	In-House	Contractor
Site characterization, e.g., geologists, hydrogeologists, geochemists, and log analysts/experts to review site characterization data submitted during permitting and throughout the project duration.	✓	
Modeling, e.g., hydrogeologists and environmental/reservoir modelers to evaluate area of review (AoR) delineation computational models during permitting and AoR reevaluations.	✓	✓
Well construction and testing, e.g., well engineers, log analysts/experts, and geologists to review well construction information and operational reports on the performance of Class VI wells and review/evaluate testing and monitoring reports.	✓	
Finance experts to review financial responsibility information during permitting and annual evaluations of financial instruments.	✓	
Risk analysts to evaluate emergency and remedial response scenario probabilities and remediation cost estimates.		✓
Policy/regulatory experts on the UIC Program and the Class VI Rule to evaluate compliance with Class VI Rule requirements.	✓	
Enforcement/compliance, e.g., staff who can initiate and pursue appropriate enforcement actions when permit or rule requirements are violated.	✓	
Inspectors including well engineers or log analysts/experts to inspect wells or witness construction activities, workovers, and/or mechanical integrity tests.	✓	
Environmental justice experts to evaluate the Environmental Justice impact report, ensuring that the report is thorough, contextualized, and agrees with the demographic and environmental data from the EPA-developed EJSCREEN tool.	✓	✓

An organizational chart of the Louisiana IMD is attached in Appendix I.

The state estimates that running the Class VI Program will cost approximately $345,000 in the first year of primacy and $1.135 million in the second year with annual adjustments thereafter. The majority of these costs are associated with hiring seven staff (green boxes in Appendix I) to support the Class VI program. Sources of funding include: the Louisiana Carbon Dioxide Geologic Storage Trust Fund (CDGSTF), UIC grants from the USEPA, and the Louisiana General Fund (state dollars).

The GSF is the primary sources for programmatic funding. Sources of monies to be deposited into this fund pursuant to La. R.S. 1109 include annual regulatory fees, application fees, grants awarded, and compliance fines. The Class VI program must draw programmatic funding from the GSF currently not to exceed $750,000 annually. Current proposed statutory revisions have been submitted to the Louisiana Legislature to remove the funding cap. The table below illustrates how the state anticipates these funds will be allocated to various program activities.

Commented [KS3]: LDNR During crosswalk review we discussed the CDGSTF and mentioned that it would be helpful to discuss it in the PD:

"Regarding the CDGSTF, the State set a maximum limit of 5 million dollars. LA clarified the CDGSTF is separate from instruments of financial surety required under the commissioner's UIC authority. ***Its intended uses include funding program administration and covering any activities that may take place after the site is closed and the commissioner has issued a certificate of completion of injection operations (necessary for liability release) in accordance with La R.S. 30:1109.*** However, as noted in La R.S. 30:1109.A.2, release of liability won't apply to the owner or last operator of record if it turns out that the CDGSTF balance for that site contains inadequate funds to address any issues that arise after the certificate of completion is issued post closure. The $5,000,000 cap on contributions from a particular operator won't hinder the commissioner in calling required financial surety documents (which again is separate) or from seeking payment into the CDGSTF from the owner/operator of record if the current CDGSTF balance isn't enough to cover something in that post closure period for the facility in question. The maximum balance pertains more to the operator's fee obligation than anything regarding financial liability or financial security requirements under UIC."

See ***italics*** above, LDNR should explain how the CDGSTF contributes to the funding of the Class VI program.

Commented [CS4R3]: Paragraph below has been added.

Commented [CS5]: Change to GSF after discussing Suzanne's comment

Activity	Percent of budget
Permit application reviews and permit issuance.	30%
Project oversight/review of operating data and testing and monitoring data and reports.	35%
Inspections/witnessing construction or tests.	5%
Data management.	5%
Enforcement/compliance-related activities.	10%
Program oversight/administration.	15%

3. Permitting, Administrative and Judicial Review Procedures

Permitting Procedures

The state's Class VI Program requires all owners or operators seeking to inject carbon dioxide for the purpose of geologic sequestration to obtain a Class VI permit to construct or convert a well and gain approval to operate prior to commencing injection activities.

Class VI permit applications will be reviewed by staff of the Louisiana IMD and issued in accordance with LAC 43:XVII, Subpart 6 (Statewide Order 29-N-6).

Reviewing Class VI Permit Applications

When Louisiana IMD receives a permit application, staff will review it to determine if it contains all of the information outlined in LAC 43:XVII.3605-3611. Any deficiencies will be noted and, if necessary, the agency will request additional information from the applicant.

After confirming that all of the required information was submitted with the permit application, agency staff will review the Class VI permit application using a multi-step process, as described below.

First, staff will perform a technical review to determine that the submitted data is accurate and of high quality, has undergone appropriate quality assurance procedures, is representative of the project and the site, and is sufficiently complete to support a full technical evaluation.
Next, a full technical evaluation of the submitted information will be performed to support the decision on the suitability of the site per the requirements at LAC 43:XVII.615. This includes an evaluation of the geologic system (LAC 43:XVII.615), the well (LAC 43:XVII.617), and the proposed operations (LAC 43:XVII.619) to ensure that the project will be protective of USDWs as well as the health, safety, and welfare of the public.

The agency will require the owner or operator to conduct an environmental justice (EJ) review and submit a report as part of the application process. An EJ review will be encouraged in the pre-permitting process and required early in the formal permitting process. At a minimum, the state will

require the report to consider the data and factors available in the EPA-developed EJSCREEN tool and identify any portions of the AoR which encompass EJ areas.

When the application is submitted, IMD staff will use the EPA-developed EJSCREEN tool to evaluate the location of the project. The EJ impact report submitted by the applicant will be reviewed to ensure that it is thorough, contextualized, and agrees with the data from the EJSCREEN tool. If a proposed site is found to be located in communities with high EJ risk factors, the Commissioner of Conservation may extend the public comment period for the application and may also require a more inclusive public participation process, including targeted public outreach and creation of better visual tools and approachable language. If the EJ review is especially complex or time-consuming, IMD may opt to outsource this assessment to a qualified third-party reviewer.

In addition to the site location questions considered in the Environmental Justice review, a weighing of siting, environmental effects, and a cost benefit analysis is required in the application as a result of *Save Ourselves, Inc., et al vs. the Louisiana Environmental Control Commission, et al*[1]. The five required question responses, colloquially known as the "Louisiana Constitutional Considerations," the "IT Question Responses," or the "Save Ourselves Questions," are hereafter the "SOS Decision Questions", and are presented in Appendix II. Answers to these questions must provide adequate detail with sufficient justification and supporting data to enable IMD to conduct a balanced review of environmental, social, economic and other factors as required by the Louisiana Constitution.

As needed throughout the permit application review process, agency staff will discuss the application with the owner or operator to ensure that needed information is provided as expeditiously as possible.

Draft Permit Issuance and Public Participation

Upon completion of the permit application evaluation, Louisiana IMD will tentatively determine whether to prepare a draft permit or to deny the application. If the agency prepares a draft permit, the agency will prepare a fact sheet summarizing the project (LAC 43:XVII.611.D) and issue a public notice of the comment period and a public hearing according to procedures listed in LAC 43:XVII.611.E.

Public notice of the preparation of a draft permit shall allow at least thirty (30) days for public comment. During the public comment period, any interested person may submit written comments on the draft permit and may request (in writing) a public hearing. Public notice of a public hearing shall be given at least thirty (30) days before the hearing. All relevant comments will be considered in making the final decision and will be addressed when a permit is issued or denied.

The agency will also notify any states, tribes or territories within the area of review of the GS project and document the results of this consultation, pursuant to LAC 43:XVII.611.E.3.iii. See Section 12 for additional information on procedures for this notification.

After completion of the public hearing and review of public comments, a final permitting decision will be made and, if appropriate, a Class VI permit will be issued. The permit will authorize the applicant to construct the injection well or convert an existing well to Class VI. The agency will also issue a response to all relevant public comments received.

1. Save Ourselves v. La. Envtl. Control Comm'n, 452 So. 2d 1152 (La. 1984)

Approving Injection in a Class VI Well

Following well drilling/conversion and completion activities, the permit applicant will submit information that the agency will consider in determining whether to approve operation of the injection well. If the information provided pursuant to LAC 43:XVII.619 warrants, the agency will authorize the applicant to inject carbon dioxide.

Commented [KS6]: LDNR: Please include a few sentences summarizing 633 (closure) 629 (reporting), 631 (plugging and abandonment), 633 (Closure and postclosure)

Commented [CS7R6]: Corey: tackle this

New subsection here for closure, reporting, P&A

Administrative and Judicial Review of Permits

Administrative reviews of Class VI permits will take place in accordance with La. R.S. 30:6 and 1105.

Commented [KS8]: LDNR: Please provide EPA with a copy or links to the citations in this section.

Judicial reviews of Class VI permits would be conducted in accordance with La. R.S. 30:12 and 15.

4. Permit, Permit Applications, Reporting and Manifest Forms

The permit application form will be Form UIC-60 CCS, a draft of which is included in Appendix III. This form will be used both for the initial permit submitted as well as the permit re-evaluation which shall occur at a frequency of five years or less as prescribed by LAC 43:XVII.609.M.1.

Commented [KS9]: LDNR: The discussion should include when the reports associated with 1-6 are due.

Commented [CS10R9]: See paragraph below 1-6

Prior to the approval of injection, a testing and monitoring plan must be approved by the IMD, per LAC 43:XVII.625.A. The requirements of this plan will be reported as follows:

1. The operator will report the analysis of the carbon dioxide stream required in LAC 43:XVII.625.A.1 as a summary report with cover letter and appended analyses.
2. The operator will submit pressure, rate, and volume monitoring data required by LAC 43:XVII.625.A.2 as an excel or comma-delineated sheet with a graphical presentation; including the raw data as required under LAC 43:XVII.629.A.1.a.viii
3. The operator will submit corrosion monitoring data as required by LAC 43:XVII.625.A.3 as a report with a cover letter.
4. The operator will submit groundwater data for any monitored zones per LAC 43:XVII.625.A.4 as a summary report with cover letter and appended analyses.
5. Prior to conducting an external or internal mechanical integrity test, casing inspection log, or pressure fall-off test as stipulated in the approved monitoring and testing plan and required under LAC 43:XVII.625.A.5 and 6, the operator must first apply for a work permit using Form UIC-17 (Appendix IV), described below.
6. Other monitoring required in the approved testing and monitoring plan and required under LAC 43:XVII.625.A.7-9 will be submitted as a summary report with cover letter and appended analyses and data.

Commented [KS11]: LDNR: In the crosswalk, you stated "While the language at §617.B.6 is not verbatim to 40 CFR 146.87(f), the intent of the federal rule is preserved: that being, prior notification by the well operator of a scheduled field action. Louisiana believes a 72-hour advance notice of a scheduled field activity is sufficient instead of a 30-day notice. §617.B.6 requires a 72 hour notice (for each test) compared to the federal rule, which requires a 30 day notice. §617.B.6 also does not include any requirements for providing the commissioner with an opportunity to witness the testing and logging or submitting a schedule of activities or revised schedule of activities.

The state's ability to address notices within this shorter time frame **will be addressed in the Program Description of the primacy application. The Program Description will also include a description of the work permit request form (Form UIC-17 or successor form) that must be approved by UIC staff prior to start of work per §621.A.9"**

I didn't see this discussion in the PD. Once provided, it should explain that LDNR has adequate resources to witness tests given a 72 hour notice, rather than 30 day notice. Shorter timeframes are also included for all witnessed field activities (notice of intent to plug, well workovers, formation testing etc).

LDNR Please add some language that describes your ability to address the shorter timeframes for all witnessed activities.

Commented [CS12R11]: See final paragraph in this section.

Monitoring reports in accordance with the approved plan must be submitted semi-annually as prescribed in LAC 43:XVII.629.A.1; with certain reports including mechanical integrity test results submitted within 30 days of the test per LAC 43:XVII.629.A.1.b; and with a report of any non-compliance submitted within 24 hours per LAC 43:XVII.629.A.1.c.

Mechanical Integrity tests (MITs) are conducted frequently throughout the life of the well. When Form UIC-17 is submitted to the OC, staff review the scope of work and may request scope revisions prior to issuing an approved work permit. Applicants are required to include a step which states that the MIT will be witness by a Conservation Enforcement Specialist (CES). Upon approval of the work permit by IMD, the operator is required to contact the appropriate CES and give 48 hours prior notice before beginning the MIT. When the MIT is scheduled such that the CES is available to witness, the operator may then conduct the proposed operation and upon completion must then submit a summary of the work conducted on Form UIC WH-1 (with appended data), included as Appendix V. This process for conducting an MIT is the standard procedure for Class I, II, III, and V wells currently.

5. Compliance Tracking and Enforcement Program

Compliance Monitoring

Compliance monitoring will, at a minimum, include on-site inspections conducted by authorized agents of the Louisiana IMD and a review of operating and monitoring reports submitted in compliance with LAC 43:XVII.629 to verify that the construction, completion, operation, maintenance, and site closure (LAC 43:XVII.633) of GS projects are performed according to approved plans and specifications and meet all permit and regulatory requirements.

The state's compliance monitoring program includes the following activities:

- Reviewing plans and reports (e.g., well completion reports, test results, workover reports) submitted by permit applicants or owners or operators.
- Conducting site inspections to verify or witness construction, operation and testing/maintenance procedures. Site inspections will be conducted by the agency's authorized agents.
- Investigating complaints alleging improper construction, completion, operation or maintenance of a GS project.
- Performing compliance monitoring (e.g., reviewing monitoring, operating and maintenance data) to verify compliance with permit conditions, regulations and any other conditions or stipulations.
- Conducting annual inspections and compliance follow-up inspections of GS projects.

Commented [KS13]: LDNR (Per **40 CFR 144.8)** please describe in the PD how non-compliance will be reported to EPA. For example, the Quarterly and annual noncompliance reports. We had made edits to the MOA that address this (reporting non-compliance). If you agree with the MOA edits feel free to place the text into the Reporting Section 15 at the end of this document.

Commented [CS14R13]: EPA: Text has been added to Section 15. Do we also need to add specific reporting deadlines?

Short blurb here about witnessed tests and the states ability to be able to witness in the shorter window of 72 hours (EPA uses 30 days)

Enforcement Procedures

Any person violating LAC 43:XVII Subpart 6, Chapter 6 (Statewide Order 29-N-6), any condition of a Class VI permit, or any rule or order of the IMD is subject to enforcement action. The agency is responsible for initiating, pursuing and resolving enforcement actions.

Enforcement proceedings may result in modification, revocation or suspension of any permit issued under authority of the UIC Program.

The agency will attempt to handle all minor violations through informal means, such as correspondence between agency staff and the alleged violator. If initial correspondence does not result in the resolution of minor violations, a Notice of Violation (NOV) may be issued. If the

violation(s) grows in size or scope, IMD may issue a Compliance Order without a civil penalty. The final enforcement stage, typically reserved for non-compliance that is egregious or may endanger the USDW, is the issuance of a Compliance Order in which a civil penalty is assessed. Issuance of NOVs, Compliance Orders, and Compliance Orders with civil penalties are entered and tracked through the database titled SONRIS, maintained by IMD staff.

If a Compliance Order with civil penalty is required, the state may seek civil penalties up to $5,000 per day per violation under La. R.S. 30:1106.D(1).

Commented [KS15]: LDNR: Please provide EPA a link or a copy of this reference.

6. Schedule for Issuing Class VI Permits

The agency anticipates that up to 14 well permit applications may be submitted during the first two years after approval of the state Class VI Program, including nine permit applications in year 1 and five permit applications in year 2. It should be noted that of the nine anticipated well applications in year 1, four are associated with a single operator in a limited geographical area, applications for which have already been submitted to EPA Region 6.

The agency expects that reviewing Class VI permit applications will require nine to twelve months per project following the date a complete permit application is submitted under proposed staffing levels and with full applicant cooperation.

7. State Priorities for Issuing Class VI Permits

It is anticipated that during the first two years after approval of the state Class VI program, at least six permits will be issued by IMD. Priority in the application queue will be based primarily on the relative date of submittal and then weighted by application completeness and size and nature of the project.

8. Mechanical Integrity Testing Requirements

To evaluate the absence of significant leaks, owners or operators of Class VI wells must, following an initial annulus pressure test, continuously monitor injection pressure, rate, injected volumes, pressure on the annulus between tubing and long-string casing, and annulus fluid volume, pursuant to LAC 43:XVII.621.A.6. Additionally, annulus pressure tests must occur on an annual basis and after performing any well workovers that involve unseating the tubing or packer, pursuant to LAC 43:XVII.627.A.2.

At least once every 12 months, owners or operators must use an approved tracer survey or a temperature or noise log to determine the absence of significant fluid movement pursuant to LAC 43:XVII.627.A.3.

The agency may require additional or alternative tests if the results presented by the owner or operator are not satisfactory to demonstrate mechanical integrity pursuant to LAC 43:XVII.627.A.5. Also, the agency may allow the use of a test to demonstrate mechanical integrity other than those described in LAC 43:XVII.627.A, with the written approval of the US EPA Administrator. To obtain approval, the agency must submit a written request to the US EPA Administrator that must set forth the proposed test and all technical data supporting its use.

The agency expects to review the results of approximately 20 MITs from Class VI well owners or operators each year.

9. Procedures to Notify Operators of the Requirement to Apply for and Obtain a Permit

Class I and Class V Wells

Louisiana IMD does not currently have any known Class I or Class V wells that inject carbon dioxide as a primary injection stream.

Class II ER Wells

The agency will evaluate information about Class II enhanced oil recovery wells (e.g., carbon dioxide injection and production data or information related to the other factors at LAC 43:XVII.603.G.2) and identify whether any projects are approaching risk thresholds. Because IMD has primacy for both the 1422 and 1425 programs, no inter-agency cooperation will be required to convert a Class II well to a Class VI well.

Commented [KS16]: LDNR -Our understanding is that LDNR will evaluate wells for enhanced risk and any owner/operators of high-risk wells will be notified that they must apply for a permit. We request that LDNR place a timeframe for the evaluation and notification. For example, LDNR will conduct the evaluations and notify the o/o in enough time so they can apply within 4 years after program approval.

Commented [CS17R16]: Is incorporating this into the five-year review sufficient?

As part of the five year AOR review required pursuant to LAC 43:XIX.405.C.3, IMD will evaluate each ER project for enhanced risk that would necessitate conversion to a Class VI project. If such increased risk is present, the agency will contact the owners or operators of these wells and inform them that they must apply for a Class VI permit. Agency staff will provide information about the state's Class VI regulation and about applying for a Class VI permit pursuant to LAC 43:XVII.603.G. Permitting of these wells will be conducted as described in Section 3 above.

10. Injection Well Inventory

Louisiana IMD staff currently enter new well information into our agency database, SONRIS. As modifications occur to wells during the operational lifetime of each well, the information contained in SONRIS is updated accordingly. Data queries are executed to export well inventories for all well class types, and Class VI wells will be no exception.

11. Exempted Aquifers

Owners or operators of Class II ER wells may apply to expand the areal extent of Class II aquifer exemptions. Such requests must be submitted concurrently with Class VI permit applications, pursuant to LAC 43:XVII.603.F.

If such requests are received, the agency will evaluate the application to determine that the area of the proposed expansion is sufficiently large to contain the carbon dioxide plume and pressure front and was determined in a manner that is consistent with the AoR modeling required under LAC 43:XVII.615.B and whether the request meets the criteria at 40 CFR 146.4.

Following this evaluation and a determination that the proposed expansion of the areal extent of the aquifer exemption meets the requirements at 40 CFR 144.7(d) and 146.4, the agency will forward the request to the EPA Region 6. No designation of an expansion of the areal extent of a Class II ER aquifer exemption for GS injection will be final unless approved by the USEPA Administrator as a revision. Other than USEPA-approved expansions of the areal extent of existing Class II aquifer exemptions, no aquifer exemptions will be issued for Class VI injection-related activities.

12. Transboundary Notification and Documentation Procedures

Due to the potentially large AoRs associated with GS projects, interstate issues may need to be taken into account. Pursuant to La. R.S. 36:354.A.10 and B.6, the state will notify authorities in any states, tribes, and territories of Class VI permit applications where the AoR crosses jurisdictional boundaries.

Commented [KS18]: LDNR: Please provide EPA with a copy or a link for this citation.

Permit applicants must provide a list of contacts for those states and tribes identified to be within the AoR of the Class VI project pursuant to LAC 43:XVII.607.C.2.s.

Based on this information and a review of the extent of the AoR, the state will notify appropriate staff in affected jurisdictions in writing to provide information about the proposed project and invite them to provide input during the permit application review process or participate in/monitor the public participation process associated with the permit application.

The state will document all input received and the responses provided. This documentation will be made a part of the administrative record for the permit application.

13. Injection Depth Waivers

Louisiana IMD will not approve nor issue injection depth waivers.

14. Financial Responsibility.

The state's regulation, at LAC 43:XVII.609.C requires owners or operators of Class VI wells to demonstrate and maintain financial resources to perform all required corrective action, plug the injection well, conduct post injection site care and site closure, and perform any needed emergency and remedial response.

Agency staff with financial expertise will review the cost estimates provided by applicants to verify that they are sufficient to cover these activities and evaluate the financial instruments the applicant proposes to use to verify that they qualify and are appropriate.

Even after the financial instruments have been approved, OC staff will continue these on-going efforts to make sure the operator maintains financial responsibility: (1) update annual cost to account for inflation; (2) update cost following amendment of project plans; and (3) oversight of financial instruments to make sure they remain active, sufficient, and meet the criteria required pursuant to LAC 43:XVII.609.C.

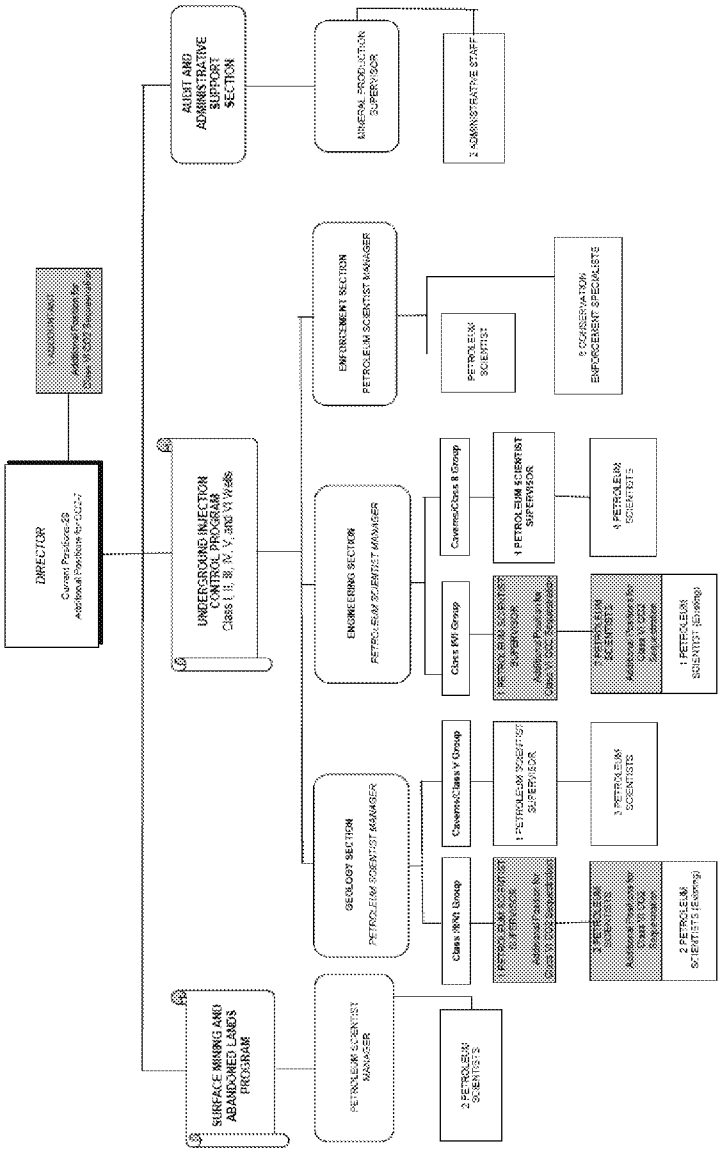
15. Reports.

The owner or operator is required to submit all required reports, submittals, and notifications under LAC 43:XVII.629 to both the LDNR and to EPA, in an electronic format acceptable to the EPA. In order to assure both the State, as the primacy authority, and EPA, as the oversight authority, have consistent data throughout program implementation, LDNR agrees to submit to EPA or allow EPA viewing access to all Class VI reports, submittals, and notifications submitted to the State. LDNR will assist EPA in owner or operator compliance with 40 CFR § 146.9 1(e) by submitting to EPA or allowing EPA viewing access to all required reports, submittals, and notifications under Subpart H of part 146 through the Department's database in an electronic format approved by EPA.

Commented [CS19]: Check for consistency

Reports submitted to the LDNR shall be uploaded by the owner or operator to the Geologic Sequestration Data Tool (GSDT). The EPA has viewing authority of all reports submitted to the LDNR through the GSDT.

APPENDIX I: Louisiana Injection and Mining Personnel Organization Chart



APPENDIX II: SOS Decision Questions

1. Have the potential and real adverse environmental effects of the proposed project been avoided to the maximum extent possible?

2. Does a cost benefit analyses of the environmental impact costs versus the social and economic benefits of the proposed project demonstrate that the latter outweighs the former?

3. Are there alternative projects which would offer more protection to the environment than the proposed project without unduly curtailing non-environmental benefits?

4. Are there alternative sites which would offer more protection to the environment than the proposed site without unduly curtailing non-environmental benefits?

5. Are there mitigating measures which would offer more protection to the environment than the proposed project without unduly curtailing non-environmental benefits?

APPENDIX III: Form UIC-60 CCS *[need to add units to some items – see Form UIC-WH-1. For example, 15. Well Construction Information – Casing Weight. Also, for consistency, Sack Cement might be revised as Total Cement Used (sacks) just like Form UIC-WH-1]*

APPENDIX IV: Form UIC-17

APPENDIX V: Form UIC WH-1 *[Need to add units to the last section - Formation]*